

### Thru-Bolts

Thru-bolts shall have a minimum diameter of  $\frac{1}{2}$ ". Pilot holes for thru-bolts shall be  $\frac{17}{32}$ " to  $\frac{9}{16}$ " in diameter. Thru-bolts must be equipped with washers at the bolt head and nut.

### Expansion Anchors

Use expansion anchors when attaching a ledger board to a concrete or solid masonry wall as shown in FIGURE 14. Bolt diameters of the anchors shall be a minimum of  $\frac{1}{2}$ "; in some cases, this may require an anchor size of  $\frac{5}{8}$ ". Minimum embedment length shall be  $2\text{--}\frac{1}{2}$ ". Expansion anchors must have washers.

### Epoxy Anchors

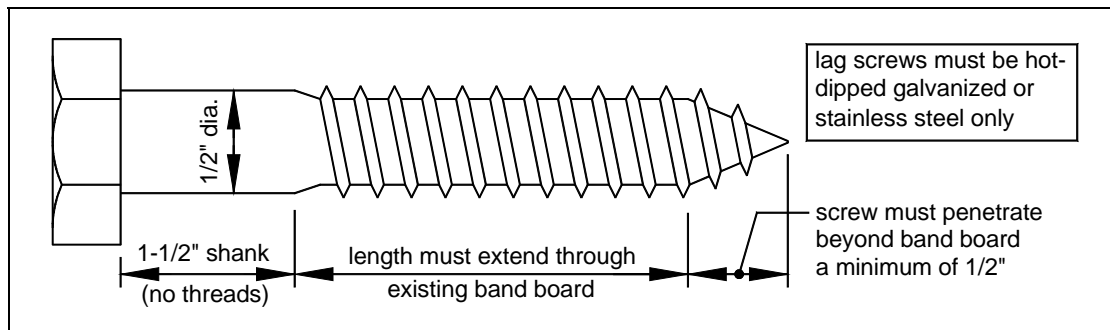
When attaching to hollow masonry, fill the cells with grout and use expansion anchors, or use one of the approved epoxy anchors listed in TABLE 5 and install as shown in FIGURE 15. Epoxy anchors shall have a minimum diameter of  $\frac{1}{2}$ " and minimum embedment length of  $3\text{--}\frac{1}{2}$ ". Installation shall be in strict conformance to the manufacturer's instructions. Epoxy anchors must have washers.

**TABLE 5: APPROVED EPOXY ANCHORS**

Manufacturer	Product
ITW Ramset/Red Head	Epcon Acrylic 7
Hilti	HY-20

### Lag Screws

Lag screws shall have a minimum diameter of  $\frac{1}{2}$ " and shall be hot-dipped galvanized or stainless steel. Lag screws may be used only when the field conditions match those shown in FIGURE 13. **You must verify the existing conditions in the field prior to applying for a building permit and installing lag screws. Compliance with all the requirements herein is critical to ensure the structural stability of your deck.** See FIGURE 20 for lag screw length and shank requirements. All lag screws shall be installed with washers.



**FIGURE 20: LAG SCREW REQUIREMENTS**

**Lag screw installation requirements:** Each lag screw shall have pilot holes drilled as follows: 1) Drill a  $\frac{1}{2}$ " diameter hole in the ledger board, 2) Drill a  $\frac{5}{16}$ " diameter hole into the solid connection material of the existing house. **DO NOT DRILL A  $\frac{1}{2}$ " DIAMETER HOLE INTO THE SOLID CONNECTION MATERIAL.**

The threaded portion of the lag screw shall be inserted into the pilot hole by turning. **DO NOT DRIVE WITH A HAMMER.** Use soap or a wood-compatible lubricant as required to facilitate tightening. Each lag screw shall be thoroughly tightened.

### LedgerLok

LedgerLok by FastenMaster, a proprietary fastener listed by ICC-ES, is similar to a lag screw. LedgerLoks have a diameter less than  $\frac{1}{4}$ " and an integrated washer. No pilot hole is required for installation. LedgerLoks shall be of sufficient length to fully penetrate the existing house band board and shall be installed in strict conformance with the manufacturer's instructions.



**Fairfax County**  
**VIRGINIA**

## **Typical Deck Details**

Based on the 2003 Virginia Uniform  
Statewide Building Code

[www.fairfaxcounty.gov/decks](http://www.fairfaxcounty.gov/decks)

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